



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------------|------------------|
| 10/644,549   | 08/19/2003  | Lynn T. Antonelli    | 84454                      | 6608             |
| 23523  | 7590        | 05/16/2005           |                            |                  |
| NAVAL UNDERSEA WARFARE CENTER<br>DIVISION NEWPORT<br>1176 HOWELL STREET, CODE 000C<br>BLDG 112T<br>NEWPORT, RI 02841 |             |                      | EXAMINER<br>DOAN, JENNIFER |                  |
|  |             |                      | ART UNIT                   | PAPER NUMBER     |
|  |             |                      | 2874                       |                  |

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/644,549

Applicant(s)

ANTONELLI ET AL.

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's communication filed on February 23, 2005 has been carefully studied by the Examiner. The arguments advanced therein are persuasive. In view of further search, however, relevant documents are found; therefore, a new rejection is set forth below. This action is **not** made final.

The Terminal Disclaimer, filed on February 23, 2005, is effective to overcome the obviousness-type double patenting rejection under U.S. Patent 6,609,836.

### ***Specification***

1. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

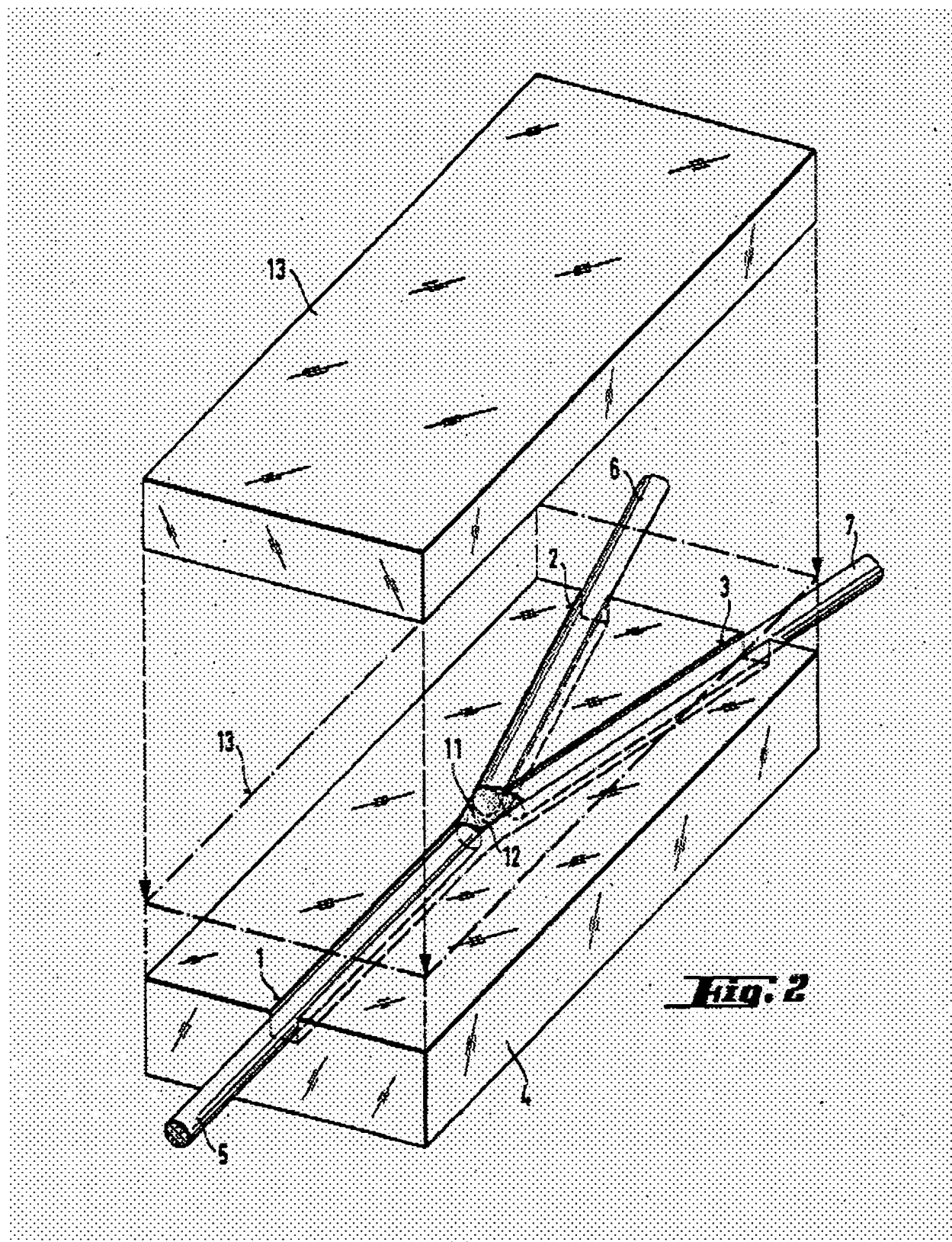
3. Claims 1, 2 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Coutandin et al. (U.S. Patent 5,030,321).

With respect to claims 1, 6 and 7, Coutandin et al. (figure 2) disclose an optical fiber coupler for connecting a first fiber optic element to a second fiber optic element,

the coupler comprising a first fiber optic element (5) extending in a first direction whereby to position a free end of the first fiber optic element (5) in a selected zone (11); a second fiber optic element (6) extending into the selected zone (11) from a direction generally opposite to the first direction to position a free end of the second fiber optic element (6) in the selected zone (11) and proximate the first fiber optic element free end; and a cured optical grade epoxy resin body (12) comprising the selected zone (11) and enveloping the free ends of the fiber optic elements (5 and 6); whereby to provide physical and optical connection between the first and second fiber optic elements (see figure 2).

With respect to claim 2, Coutandin et al. (figure 2) disclose the coupler, wherein the first fiber optic element comprises a single fiber optic strand (5) and the second fiber optic element comprises a plurality of fiber optic strands (6 and 7).

With respect to claim 8, Coutandin et al. (figure 2 and column 2, lines 43-51) disclose the coupler, wherein at least one of the first and second fiber optic elements comprises a plurality of fiber optic strands (6 and 7), the positions to which the free ends of the first and second elements extend being spaced apart by a distance (see figure 2) allowing a sufficient extent of diffusion of light in the optical grade epoxy resin (12) there between to couple light between each strand of one of the first and second fiber optic elements with each strand of the other of the elements.



***Allowable Subject Matter***

4. Claim 3-5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose or reasonably suggest the coupler, wherein the body is provided with a cone-shaped end and a generally planar base end as recited in claim 3.

Claims 4, 5 and 9 are dependent on the objected claim 3; therefore, claims 4, 5 and 9 are also objected.

5. Claim 10 is allowed.

The prior art of record fails to disclose or reasonably suggest a method for connecting a first fiber optic element to a second fiber optic element comprising the steps of providing a rigid body; coating outer surfaces of the body with a layer of mold making wax; separating the body from the wax to provide a hollow wax housing having a cone-shaped end and an open base end, in combination with the other limitations of claim 10.

***Conclusion***

6. Applicants' arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Arditty et al. (U.S. Patent 4,191,446) disclose a direction coupling

Art Unit: 2874

device having a suitable filled with an immersion medium being formed between the end faces of the two fibers.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent Examiner

May 10, 2005